



**2007 FISH TISSUE AND SEDIMENT  
MONITORING PLAN  
WATER QUALITY STANDARDS & BIOLOGICAL  
PROGRAMS**



**April 24, 2007**

DRAFT

## **Introduction**

The Virginia Department of Environmental Quality (DEQ), Water Quality Standards and Biological Monitoring Programs, Office of Water Quality Programs is responsible for the design and execution of the Statewide Fish Tissue and Sediment Monitoring Program. This document provides information concerning the proposed stations for monitoring fish tissue and sediment during 2007 and the rationale for the station selections.

## **Objective**

The objective of the Statewide Fish Tissue and Sediment Monitoring Program is to systematically assess and evaluate, using a multi-tier screening, water bodies in Virginia in order to identify toxic contaminant(s) accumulation with the potential to adversely affect human users of the resource. A second objective of the program is to determine the presence of toxic chemical contaminants in the aquatic environment which have the potential to adversely affect the aquatic biological community. Data collected will be used to quantify human health risks and ecological/environmental health conditions. In addition, follow-up studies are conducted when problems are found and/or when recommended by the Virginia Department of Health (VDH) through a Memorandum of Agreement between VDH and DEQ. VDH uses data generated by this program to assess the need for issuing or modifying fish consumption advisories. The DEQ employs the data to assess water quality for 305(b) Report /303(d) Listing and Total Maximum Daily Load (TMDL) determinations.

## **Sampling Design**

The water bodies of Virginia are separated into fourteen river basins or subbasins (see Table 1). In the past, fish tissue and sediment were sampled in all fourteen of the river basins within a five-year cycle following procedures stated in the DEQ Quality Assurance/Quality Control Project Plan for the Fish Tissue and Sediment Monitoring Program (1998). In April 2000, the General Assembly amended section 62.1-44.19:5 of the code of Virginia which instructed the DEQ to sample all of the river basins within a three-year rotational cycle contingent upon available funding. Between 2001 and 2003 a three year rotation was employed, but due to funding cuts and staff reductions after 2003, the program has reverted back to the original five year cycle.

**Table 1. River Basins in Virginia**

		<b>Basin Code</b>
1)	Potomac River Subbasin	1A
2)	Potomac River-Shenandoah River Subbasin	1B
3)	James River	2-
4)	Rappahannock River	3-
5)	Roanoke River	4A
6)	Yadkin River	4B
7)	Chowan-Chowan River Subbasin	5A
8)	Chowan-Albemarle Sound Subbasin	5B
9)	Tennessee and Big Sandy River-Big Sandy Subbasin	6A
10)	Tennessee and Big Sandy River-Clinch Subbasin	6B
11)	Tennessee and Big Sandy River-Holston Subbasin	6C
12)	Chesapeake Bay, Atlantic Ocean, and Small Coastal	7-
13)	York River	8-
14)	New River	9-

The monitoring sites which have been selected for the 2007 routine statewide sampling season will be primarily located in the following river basins: the Tennessee and Big Sandy River Basin (last sampled in rotation 2002), the Dan River portion of the Roanoke River and Yadkin River Basin (last sampled in rotation in 2002), and the Chowan River and Albemarle Sound Basin (last sampled in rotation 2002). In addition to the "routine" sampling stations located in the Tennessee-Big Sandy, Dan-Yadkin, and Chowan-Albemarle Sound watersheds, the sampling stations list includes additional stations in the Blackwater River watershed of the Chowan River Basin to supplement mercury contamination in tissue data for that watershed. A total of 107 fish tissue and sediment sampling stations have been selected. The sampling stations list includes the routine monitoring stations and special requests. All of the sampling sites are ranked from 1 to 2 with 1 being the high priority and 2 the low priority. The higher rank is based on known or potential water quality problems at the sampling location, special requests by other DEQ units, VDH or citizen groups, and/or if the sampling location is a relatively intensive resource for recreational or commercial fishing. Extensive effort will be made to complete all of the stations selected, but if equipment problems and/or severe weather impact(s) the sampling schedule, or if there are unanticipated budget reductions or staff limitations, priority will be given to the higher ranked stations.

Most of the sampling sites are freshwater; however, several are brackish or saltwater locations. The samples that will be collected at each freshwater station include one sediment sample and three to five tissue composite samples (5-10 individuals of the same species per composites) consisting of fish species that are typically consumed by humans. Samples will include at least one bottom feeder (e.g. catfish sp.), which may be highly exposed to chemically contaminated sediments compared to other species, and two to four upper and middle trophic level feeders (e.g. bass and sunfish species, respectively.), which may be exposed to chemical contaminants via biomagnification.

Collection of targeted species for tissue analysis at the brackish and saltwater sites may be problematic since only 10-15% of the fish and shellfish species at the stations are year-round residents and few of the resident species are typically consumed by humans (Murdy et. al. 1997). It is likely that sample collection techniques will yield several species of migratory fish and shellfish that are consumed by humans and a few resident fish species that are not consumed by humans. Contaminants found in migratory fishes may not reflect local pollution problems but may be used to calculate human health risks from consumption. Contaminants found in sediment and resident fishes may be used to identify local inputs of bioaccumulative contaminants. Therefore, the samples that will be collected at each brackish or saltwater station include one sediment sample and three to five composite samples (5-10 individuals of the same species per composite) consisting of an edible migratory, an edible or non-edible resident, and an edible or non-edible bottom species. For a detailed list of species that will be targeted at each brackish or saltwater station (see Table 2).

The entire data set should help determine if any unacceptable human health risks are associated with fish consumption, and if local inputs of bioaccumulative contaminants are in tissue and/or sediment at levels of concern. Samples collected will be analyzed for metal and/or organic contaminants by the College of William and Mary-Virginia Institute of Marine Science.

#### Station Selection Criteria

The stations in each basin have been selected to produce site specific conclusions and provide spatial coverage of the entire basin. The following criteria were used to select the 2007 sampling stations:

- Historical Data Review
- Spatial Distribution
- Specific Water Quality Problems
- Major Tributary Status
- External Request from other VADEQ offices, State Agencies, and Citizen Groups
- Point Source Input
- Nonpoint Source
- Major Fishery

The attached references were used in selecting the sampling stations. The water body ID number, station number, priority rank, river mile, latitude, longitude, county, criteria for selection, and corresponding USGS topographical survey map name for each proposed sampling station are provided (see Table 3). Summary maps showing the location of all of the proposed sampling stations are attached (see figures1-4).

#### Sample Collection and Reporting

Fish tissue and sediment samples will be collected in the early spring through late fall, 2007. Analytical data for all of the samples should be received from the laboratory by the end of June 2008. The data will be tabulated as received and sent to VDH per an October 2000 Memorandum of Agreement between the VDH and DEQ. VDH will make an evaluation regarding potential human health impacts due to contaminated fish consumption and issue fish consumption advisories or bans as needed. DEQ will assess the data in the next 305(b) assessment cycle.

The tabulated data will also be sent to the water quality monitoring managers for 305(B) reporting and review and posted on the DEQ web site at: [www.deq.virginia.gov/fishtissue/](http://www.deq.virginia.gov/fishtissue/)

Table 2. Target species at each of the brackish water or saltwater stations.

Migratory Fish (Normally consumed by humans)	Resident Fish (Some may not be consumed by humans)	Benthic Fish/Shellfish (Some may not be consumed by humans)
Striped Bass	White Perch	Oyster spp.
Spot	Yellow Perch	Clam spp.
Atlantic Croaker	Killifish, Banded	Blue Crab
Weak Fish	Killifish, Striped	Summer Flounder
Black Sea Bass	Killifish, Rainwater	Smallmouth Flounder
Spotted Seatrout	Killifish, Marsh	Oyster Toadfish
Black Drum	Killifish, Spotfin	Hogchoker
Red Drum	Mummichogs	Tongue Fish
Silver Perch	Sheepshead Minnow	Channel Catfish
Northern Kingfish	Silverside, Inland	White Catfish
Southern Kingfish	Silverside, Rough	
Gulf Kingfish	Silverside, Atlantic	
Bluefish	Bay Anchovy	
Hickory Shad		
Alewife		
American Shad		
Blueback Herring		

**Table 3. 2007 Fish Tissue and Sediment Monitoring Stations**

Last Revised April 24, 2007

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
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**Roanoke (Dan & Yadkin) Basin**

1	W-M03R	4BARA035.07	Ararat River near NC-VA State Line near Rt. 739	1	N36° 33.392'	W80° 34.120'	Mount Airy North	Patrick	As and Hg in tissue 2002 data, Spatial distribution
2	W-M02R	4BLOV007.92	Lovills Creek near State Line	1	N36 33.918'	W80 37.694'	Cana	Carroll	1997 & 2002 data ok, Spatial distribution
3	W-M02L	4BLOV008.45	Lovills Creek Lake	2	N36° 34.783'	W80° 38.5833'	Cana	Carroll	Hg project
4	C-L71R	4ABAN000.50	Banister River upstream of pipeline	1	N36 41.986'	W78 48.225'	Omega	Halifax	PCBs and BDEs in tissue 2000 & 1999 data, Pb and As in tissue Tingler Page M4-18, M6-19
5	C-L71R	4ABAN008.30	Banister River near Rt. 614 bridge	1	N36° 46.039'	W78° 52.902'	Halifax	Halifax	PCBs and Hg in tissue 2002 data, As elevated in tissue 1999 data
6	C-L71L	4ABAN012.46	Banister Lake near Dam	2	N36 46.780'	W78 55.592'	Halifax	Halifax	Spatial distribution
7	W-L53L	4ABAU005.34	Martinsville Reservoir near dam (Beaver Creek)	1	N36° 44.6667'	W79° 52.5167'	Martinsville West	Henry	Hg project
8	C-L66R	4ACRR000.80	Cherrystone Creek near Rt. 703 bridge, below Chatham STP	1	N36 48.854	W79 21.054	Spring Garden	Pittsylvania	Pb, Hg in tissue 2002 data, Chlordane, DDD,DDE,DDT,Endrin in sediment

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
9	C-L64L	4ADAN001.18	Dan River near Staunton River State Park	1	N36 41.391'	W78 40.352'	Buffalo Springs	Halifax	PCBs in tissue 2000 data
10	C-L64R	4ADAN013.34	Dan River, downstream of South Boston	1	N36° 41.583'	W78° 52.583'	South Boston	Halifax	PCBs in tissue 2002, 2000 & 1999 data, Hg in tissue 2002 data, Pb detected in Bluegill 2002 data
11	C-L60R	4ADAN054.03	Dan River, downstream of Danville	1	N36 34.204'	W79 22.435'	Halifax	Pittsylvania	PCBs in tissue 1999 data, Spatial distribution
12	C-L57R	4ADAN075.22	Dan River, upstream of Danville, Rt. 880	1	N36 32.493'	W79 36.308'	Brosville	Pittsylvania	Spatial distribution
13	W-L42R	4ADAN183.83	Dan River, near Rt. 648, Pinnacles	1	N36 39.673'	W80 26.866'	Meadows of Dan	Patrick	Pb detected in Black Jumprock Sucker 1999 data, Spatial distribution
14	W-L42L	4ADAN187.94	Dan River above Townes Reservoir dam	2	N36° 41.1167'	W80° 25.8000'	Meadows of Dan	Patrick	Hg project
15	W-L42L	4ADAN196.09	Dan River above Talbott Reservoir	2	N36° 40.7500'	W80° 23.1000'	Meadows of Dan	Patrick	Hg project
16	C-L61R	4AFAL000.92	Fall Creek near Rt. 655 bridge, Danville	2	N36 35.551'	W79 22.694'	Danville	Danville City	Pb detected in Channel Catfish 2002 data, Fecal Urban 1998 303D listing Page I-19

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
17	W-L51L	4AGOB005.18	Fairy Stone Lake at Rt. 623 bridge near Fairy Stone State Park (Goblintown Creek)	1	N36° 47.6135'	W80° 07.2075'	Philpott Reservoir	Patrick	Hg project
18	C-L74R	4AHYC002.70	Hyco River near Rt. 58	1	N36 40.072'	W78 45.279'	Omega	Halifax	BDEs and PCBs in tissue 2000 data
19	C-L74R	4AMYO001.87	Mayo Creek upstream Rt. 96	1	N36 34.362'	W78 49.327'	Cluster Springs	Halifax	BDE project, Spatial distribution
20	W-L46R	4ANMR002.60	North Fork Mayo River near Rt. 629	1	N36 34.073'	W79 59.163'	Price	Henry	Hg in tissue 2002 data, As in tissue 1999 data
21	W-L45R	4ASMR004.17	South Fork Mayo River near Rt. 695	1	N36 33.34	W80 01.289	Spencer	Henry	Pb in tissue, PAHs
22	W-L54R	4ASRE026.06	Smith River downstream of Martinsville Dam near Gaging Station	1	N36° 39.702'	W79° 52.833'	Martinsville	Henry	PCBs in Brown Trout slightly elevated 2002 data, Pb detected in Bull Chub 2002 data, Pb detected in Redbreast Sunfish 2002 data and Bluegill 1999 data, Pb in tissue, DDE and Chlordane in sediment 1999 data,

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
23	W-L51R	4ASRE046.90	Smith River (Philpott Reservoir above Dam)	2	N36° 46.893'	W80° 01.685'	Philpott	Henry	Hg, Pb detected in tissue 2002 data, Spatial distribution, Major Fisheries
24	W-L18L	4ATMA004.60	Lake Burton near dam (Tomahawk Creek)	1	N36° 52.357'	W79° 32.098'	Callands	Pittsylvania	Hg project

**Chowan River and Albemarle Sound Basin**

25	P-K31R	5ABKR003.68	Blackwater Swamp at Rt. 625	1	N37° 08.049'	W77° 12.464'	Disputanta North	Prince George	Hg inquiry, Spatial distribution,
26	T-K36R	5ABLW000.65	Blackwater River near state line	1	N36 33.150	W76 54.953'	Riverdale	Southampton	Hg, PCBs - Hg VEERF Project
27	T-K36R	5ABLW022.84	Blackwater River near Rt. 611 bridge	1	N36 44.005	W76 55.005	Franklin	Southampton	Hg, PCBs in tissue, Cd in fish and sediment, Nickle in sediment
28	T-K33R	5ABLW053.54	Blackwater River near Rt. 621	1	N36 58.409'	W76 51.159'	Raynor	Southampton	Hg, PCBs - Hg VEERF Project
29	P-K32R	5ABLW074.66	Blackwater River at Rt. 40	2	N37° 03.862'	W77° 03.491'	Waverly	Sussex / Surry	Hg Special Study Site
30	P-K32L	5ACPH002.60	Spring Hill Pond (Coppahaunk Swamp)	1	N37° 01.5000'	W77° 00.0500'	Dendron	Sussex	Hg project
31	P-K35R	5ALTD005.10	Lightwood Swamp (Airfield Pond) near Rt. 628	1	N36° 54.514'	W77° 01.662'	Manry	Sussex	Hg project
32	P-K35L	5ASCK020.65	Brittles Pond - Seacock Swamp	2	N36° 58.0500'	W77° 01.0500'	Ivor	Sussex	Hg project

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
33	P-K23R	5AATH006.56	Arthur Swamp near Rt. 670	1	N37° 10.334'	W77° 28.572'	Petersburg	Dinwiddie	Hg inquiry, Spatial distribution
34	P-K14R	5ABHC003.73	Big Hounds Creek near Rt. 653 bridge	1	N36 59.767	W78 07.574	Kenbridge West	Lunenburg	Pb in tissue 2002, Fecals
35	P-K23R	5AHRA004.16	Hatcher Run near Rt. 670	1	N37° 07.790'	W77° 29.233'	Petersburg	Dinwiddie	Hg inquiry, Spatial distribution
36	C-K15L	5ALZT000.12	Lazaretto Creek near dam - Crystal Lake (Nottoway Pond)	1	N37° 07.3167'	W78° 5.1000'	Blackstone West	Nottoway	Hg project
37	C-K14L	5AMDT004.94	Modest Creek Reservoir near dam - Lake Victoria	1	N37° 02.2367'	W78° 13.4000'	Rubermont	Lunenburg	Hg project
38	T-K30R	5ANTW000.38	Nottoway River near state line	1	N36° 32.674'	W76° 55.344'	Riverdale	Southampton	Hg inquiry, As in tissue
39	P-K30R	5ANTW003.30	Nottoway River near Rt. 258 bridge	1	N36 34.2	W76 56.754	Riverdale	Southampton	Hg & Dioxin in fish tissue
40	P-K28R	5ANTW035.44	Nottoway River near Rt. 653 Careys bridge	1	N36° 46.089'	W77° 09.924'	Sebrell	Southampton	Hg inquiry, Spatial distribution
41	P-K19R	5ANTW091.70	Nottoway River near Rt. 619, Double bridge	1	N36 50.927	W77 33.835	Purdy	Greenville	Arsenic in tissue
42	P-K16R	5ANTW118.04	Nottoway River near Rt. 613 (Gills bridge)	1	N36 59.758	W77 50.435	Warfield	Dinwiddie	Pb in tissue

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
43	C-K16L	5ANTW127.14	Nottoway Reservoir at dam - Fort Pickett Reservoir	1	N36° 59.383'	W77° 57.750'	Danieltown	Brunswick	Hg project
44	C-K14L	5ANTW143.06	Nottoway Falls Lake	1	N37° 02.750'	W78° 08.967'	Rubermont	Nottoway	Hg project
45	P-K23R	5AROW002.41	Rowanty Creek near Rt. 602 bridge	1	N36° 58.964'	W77° 22.869'	Stony Creek	Sussex	Hg inquiry, Spatial distribution
46	P-K21R	5ASTO006.99	Stony Creek at Rt. 680 bridge	2	N36° 58.217'	W77° 27.005'	Stony Creek	Dinwiddie	Hg inquiry, Spatial distribution
47	P-K27R	5ATRE016.02	Three Creek at Rt. 659 bridge	2	N36° 43.308'	W77° 18.568'	Drewrysville	Southampton	Hg inquiry, Spatial distribution
48	P-K12R	5AFON006.07	Fontaine Creek at Rt. 625 bridge	1	N36° 33.966'	W77° 26.123'	Claresville	Greenville	Hg inquiry, Spatial distribution
49	P-K06L	5AGTC009.94	Great Creek Reservoir near dam	1	N36° 46.6000'	W77° 53.5166'	Alberta	Brunswick	Hg project
50	P-K09R	5AMHN026.54	Meherrin River near Rt. 730 bridge	1	N36 34.18333	W77° 21.675'	Margaretsville	Greenville	Hg, Pb in tissue, Cd in whole fish tissue
51	P-K09R	5AMHN051.43	Meherrin River near Rt. 301, below the city of Emporia	1	N36 40.81	W77 31.529	Emporia	Emporia City	PCBs, As, Hg, Pb in tissue
52	P-K08L	5AMHN053.00	Emporia Reservoir near dam	1	N36 41.82	W77 33.558	Emporia	Emporia City	Hg project, As, Hg in tissue
53	P-K12R	5AMLS005.42	Mill Swamp at Rt. 660 bridge	1	N36° 36.544'	W77° 29.161'	Claresville	Greenville	Hg inquiry, Spatial distribution

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
54	P-K08L	5ARDC007.30	Brunswick County Lake near dam (Reedy Creek)	1	N36° 46.9667'	W77° 43.7333'	Smokey Ordinary	Brunswick	Hg project
55	T-K41R	5BBKW002.50	Blackwater Creek at Blackwater Road bridge	2	N36° 36.4167'	W76° 05.2017'	Creeds	Virginia Beach	Hg project
56	T-K42E	5BBKY006.37	Back Bay off mouth of Nawney Creek - Redhead Bay	2	N36° 38.0900'	W75° 59.2200'	North Bay	Virginia Beach	Hg project
57	T-K39L	5BLKD002.15	Dismal Swamp Lake Drummond-2	1	N36 35.326'	W76 29.116'	Lake Drummond	Chesapeake	Hg project, Hg in tissue
58	T-K42E	5BMDY001.00	Muddy Creek near mouth at North Bay	1	N36 42.894'	W75 59.208'	North Bay	Virginia Beach	Hg in tissue
59	T-K39R	5BNTW011.90	Northwest River near Rt. 168	1	N36 34.094	W76 11.905	Moyock	Chesapeake	Hg, As in tissue, Hg, Zn, Chlordane, DDD, DDE, PCB in Sediment
60	T-K41R	5BWNC003.65	West Neck Creek at Rt. 672 bridge - Indian River Road	1	N36° 43.2667'	W76° 02.0500'	Pleasant Ridge	Virginia Beach	Hg project
61	T-K39R	5BXCK000.00	Dismal Swamp Feeder Ditch near Arbuckle Landing	1	N36 35.509'	W76 23.078'	Lake Drummond	Chesapeake	Hg VEERF Projectst

Tennessee and Big Sandy River Basin

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
62	S-Q05R	6ADIS010.02	Dismal Creek	1	N37 15.703	W81 57.194	Patterson	Buchanan	PCBs, As, Pb in tissue
63	S-Q04R	6AGAR001.78	Garden Creek near Garden Creek Mission	1	N37 11.432	W82 00.308	Vansant	Buchanan	PCBs, As in tissue, Chlordane, DDT, DDD, PCB, PAH,s in Sediment
64	S-Q03R	6AKOX008.11	Knox Creek near VA/KY State Line	1	N37 28.253	W82 03.764	Hurley	Buchanan	PCBs in tissue, As, PCB, Silver, & PAH's in Sediment, Benthic Imapired
65	S-Q03R	6AKOX019.3X	Knox Creek downstream Long Bottom Branch	1	N37 23.291	W81 58.775	Hurley	Buchanan	PCBs in tissue
66	S-Q08R	6ALEV130.00	Levisa Fork near VA/KY State Line	1	N37 21.804	W82 13.067	Harman	Buchanan	PCBs, As, Cu, in tissue
67	S-Q04R	6ALEV151.25	Levisa Fork downstream Dismal Creek	1	N37 14.112'	W82 02.966'	Vansant	Buchanan	PCBs in tissue
68	S-Q12L	6ALRB000.99	Laurel Lake near dam (Breaks Interstate Park)	1	N37° 17.3000'	W82° 17.8833'	Elkhorn City	Dickenson	Hg project
69	S-Q13L	6APNK001.29	North Fork Pound Reservoir	1	N37 07.511	W82 37.809	Flat Gap	Wise	Hg, As in tissue
70	S-Q13L	6APNR002.15	John W. Flannagan Reservoir (Pound River)	1	N37 13.799	W82 20.681	Haysi	Dickenson	As in tissue

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
71	S-Q14L	6ACNR003.00	Cranesnest River near Fishtrap Branch	2	N37 11.900'	W82 23.433'	Clintwood	Dickenson	Spatial distribution
72	S-Q11R	6ARSS025.50	Russell Fork near Haysi	1	N37 12.329	W82 17.72	Haysi	Dickenson	PCBs, As, Hg in tissue
73	S-Q07R	6ASAT004.56	Slate Creek near Buchanan County Vocational Center	1	N37 17.638	W82 03.053	Grundy	Buchanan	Pb in tissue, As and Hg in Sediment
74	S-P11R	6BBER001.14	Bear Creek near Rt. 681, below Town of Wise STP	1	N36 57.092	W82 35.345	Wise	Wise	PCBs, Pb in tissue
75	S-P03R	6BBIG000.12	Big Creek near Allegany Street bridge off Rt. 67 at Richlands	1	N37° 5.8167'	W81° 48.0500'	Richlands	Tazewell	2007 battery casing fire response
76	S-P01L	6BCAV002.88	Lake Witten (Cavitts Creek)	1	N37 10.268'	W81 31.195'	Tazewell North	Tazewell	Hg project
77	S-P13R	6BCLN211.00 6BCLN236.00 6BCLN264.96	Clinch River near Clinchport	1	N36 38.918	W82 44.963	Clinchport	Scott	Pb, As in tissue
78	S-P09R		Clinch River near Dunganon	1	N36 49.026	W82 28.642	Dungannon	Scott	PCBs, Pb in tissue
79	S-P09R		Clinch River downstream Apco near Carbo	1	N36 55.268'	W82 12.760'	Carbo	Russell	Hg project, As in tissue
80	S-P03R	6BCLN315.11	Clinch River near Rt. 723 & below Richlands STP	1	N37° 5.4250'	W81° 50.4983'	Richlands	Tazewell	2007 battery casing fire response

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
81	S-P01R	6BCLN348.31	Clinch River near Rt. 61 bridge at Tazewell	1	N37° 8.0567'	W81° 31.4267'	Tazewell North	Tazewell	2003-4 Tazewell flooding response
82	S-P14R	6BCOP002.00	Copper Creek near Jennings Ford	1	N36 39.413'	W82 43.283'	Clinchport	Scott	As in tissue 1997 data
83	S-P11R	6BGUE006.45	Guest River near Rt. 72	1	N36 55.750'	W82 27.450'	Dungannon	Wise	PCBs, As, Hg in tissue
84	S-P24R	6BIND009.10	Indian Creek near Gibson Mill	1	N36 36.329'	W83 34.551'	Wheeler Tenn	Lee	Hg project
85	S-P09L	6BLSR008.12	Bark Camp Lake (Little Stony Creek) Corder Bottom Lake near dam	2	N36° 52.0000'	W82° 31.2500'	Fort Blackmore	Scott	Hg project
86	S-P18L	6BPLL012.99	Big Cherry Reservoir (South Fork Powell River)	2	N36° 50.7167'	W82° 39.8833'	East Stone Gap	Wise	Hg project
87	S-P17R	6BPOW178.33	Powell River Town of Big Stone Gap	1	N36 51.218	W82 48.346	Big Stone Gap	Wise	Water Quality Problems
88	S-P20R	6BPWL002.48	North Fork Powell River near Leeman Field in Pennington Gap	1	N36 45.65316	W83 00.843	Pennington Gap	Lee	As in tissue, Biol. Impaired, Urban
89	S-P20R	6BPWL010.36	North Fork Powell River at Rt. 606	2	N36 47.867'	W82 59.583'	Keokee, Ky	Lee	Spatial distribution

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
90	S-P20L	6BPWL025.32	Keokee Lake (North Fork Powell River)	1	N36 50.981	W82 51.437	Big Stone Gap	Lee	Hg project, As in tissue
91	S-P20R	6BSRA001.34	Straight Creek near Penn Lee	1	N36 47.208'	W83 03.313'	Pennington Gap	Lee	PCBs in tissue
92	S-P13R	6BSTO004.56	Stock Creek near Rt. 650 upstream Clinchport	1	N36 43.113	W82 45.023	Duffield	Scott	PCBs in tissue, As, Abandoned Lithium Mine (Cypris Foote Mineral)
93	S-O07L	6CBEV022.29	Beaver Creek Lake	1	N36° 39.0167'	W82° 6.5833'	Wyndale	Washington	Hg project
94	S-O07R	6CBEV015.27	Beaver Creek near State Line	1	N36 35.706'	W82 11.118'	Bristol Tenn	Bristol	PCBs - VEERF Project
95	S-O11L	6CBRU010.86	Hidden Valley Lake (Big Brumley Creek)	2	N36 50.947'	W82 04.412'	Brumley	Washington	Hg project
96	S-O02R	6CBVD000.07	Beaverdam Creek, American Cyanamid Damascus Plant Closed in 1976	1	N36 38.137	W81 47.49	Damascus	Washington	Pb in tissue, Zn in water and sediment
97	S-O04L	6CHUN005.24	Hungry Mother Lake	1	N36 52.328	W81 30.9087'	Marion	Smyth	As, Hg, DDT, in Sediment
98	S-P11L	6CLAU001.84	Laurel Bed Lake	2	N36° 57.3167'	W81° 48.7167'	Saltville	Russell	Hg project
99	S-O04R	6CMFH033.40	Middle Fork Holston River near Seven Mile Ford	1	N36 49.083	W81 37.011	Marion	Smyth	PCBs, Hg in tissue, Total Chlordane and Hg

SITE #	WBID	RIVER MILE	STATION	PRIORITY	LAT	LONG	TOPO	COUNTY	PROBLEM
100	S-O13R	6CNFH008.80	North Fork Holston River near Rt. 23 bridge, Weber City	1	N36° 36.530'	W82° 34.113'	Kingsport	Scott	Hg in tissue
101	S-O12R	6CNFH039.18	North Fork Holston River near Mendota	1	N36° 42.078'	W82° 18.435'	Mendota	Washington	Hg in tissue
102	S-O11R	6CNFH078.55	North Fork Holston River downstream Saltville	1	N36° 52.068'	W81° 50.063'	Glade Spring	Washington	Hg, PCBs in tissue
103	S-O06R	6CSFH070.80	South Holston Lake	1	N36 38.869'	W81 55.393'	Abingdon	Washington	PCBs in tissue
104	S-O02R	6CSFH088.91	South Fork Holston River near Rt. 875 bridge	1	N36 43.664	W81 43.941	Konnarock	Washington	As, Pb in tissue 2002, PCBs, Hg in tissue 1997
105	S-O06R	6CWLF006.55	Wolf Creek near Rt. 75 below Town of Abingdon	1	N36 38.482	W81 59.111	Abingdon	Washington	PCBs, Pb, Hg in tissue

**Potomac River Basin**

106	N-A15R	1AACO012.78	Lake Accotink	1	N38 47.717	W77 13.117	Falls	Fairfax County	Citizen Request
107	N-A15R	1AACO012.58	Accotink Creek Below Dam	1	N38 47.481	W77 13.059	Falls Church	Fairfax County	Citizen Request

Figure 1. Roanoke (Dan & Yadkin) Basin Sites (1"=11miles)

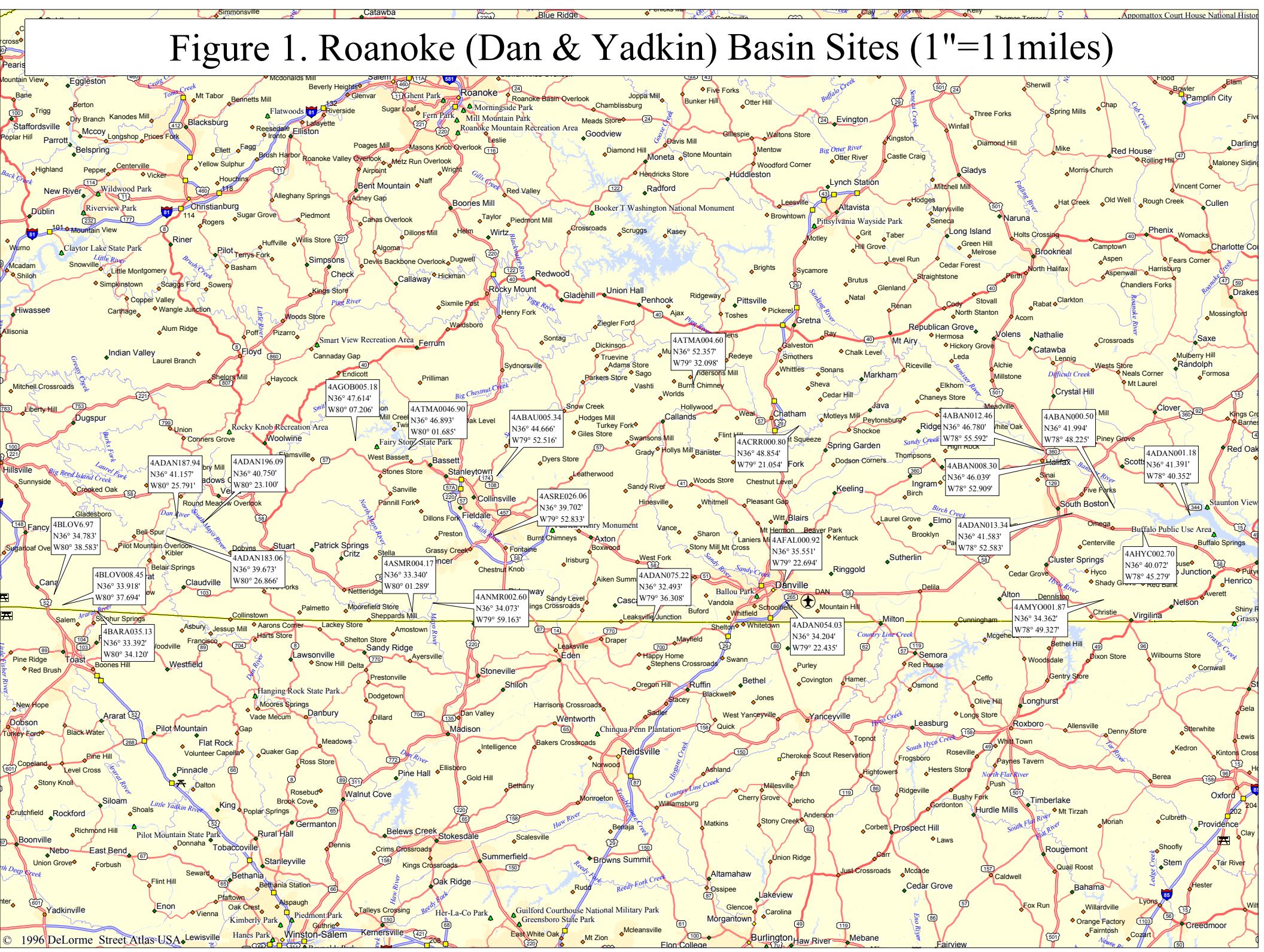


Figure 2. Chowan River Albemarle Sound Basin Sites (1"=13 miles)

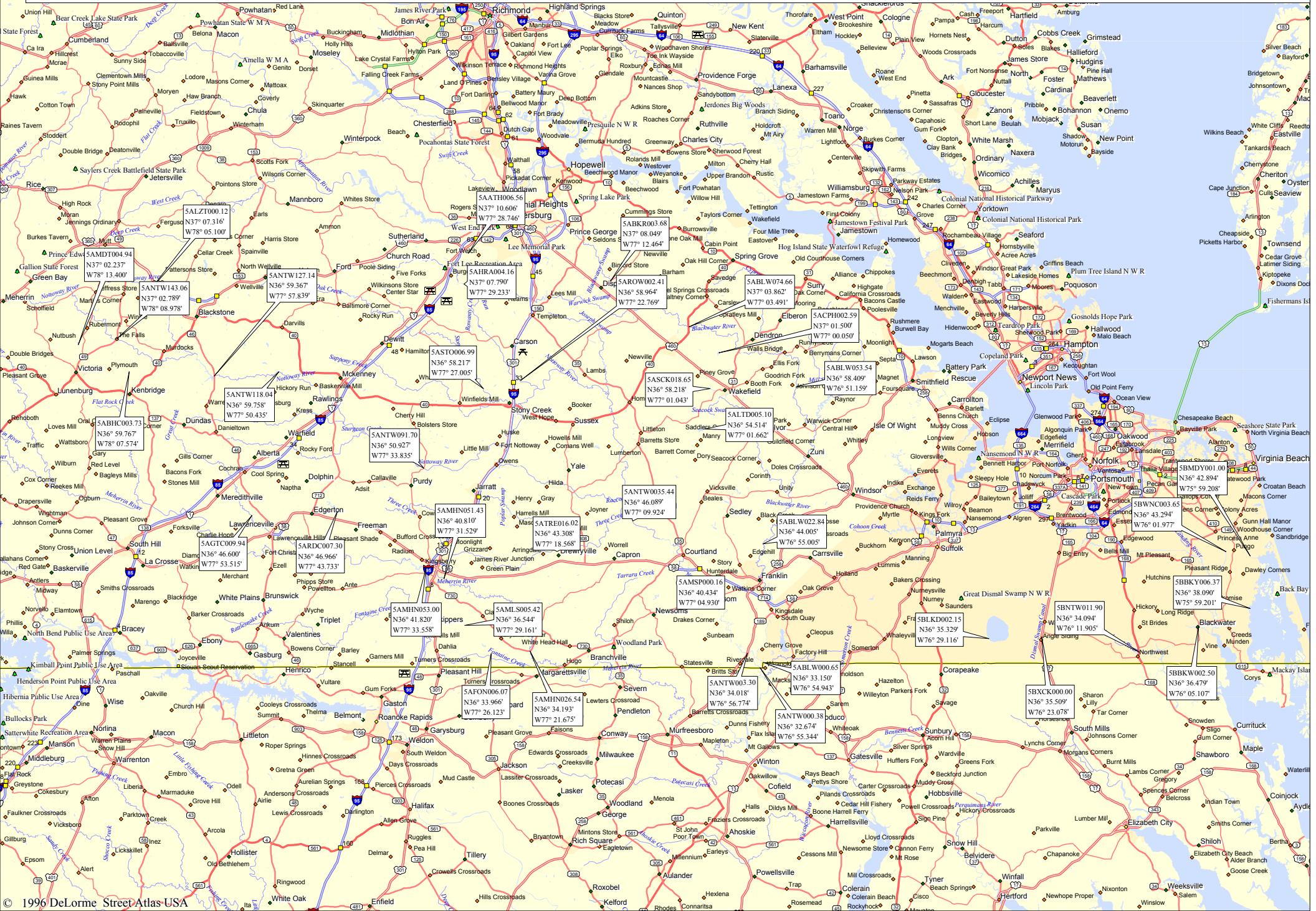
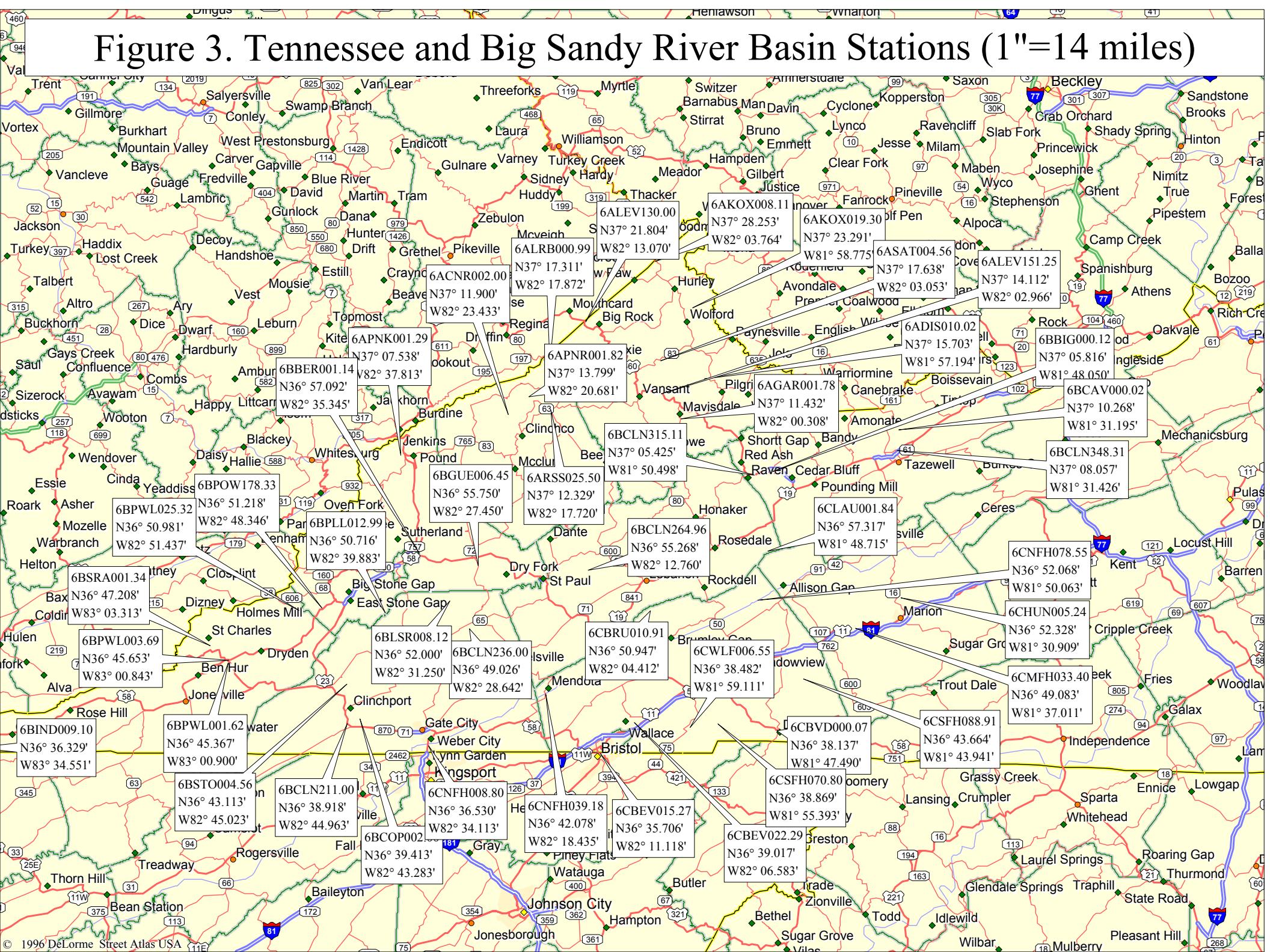
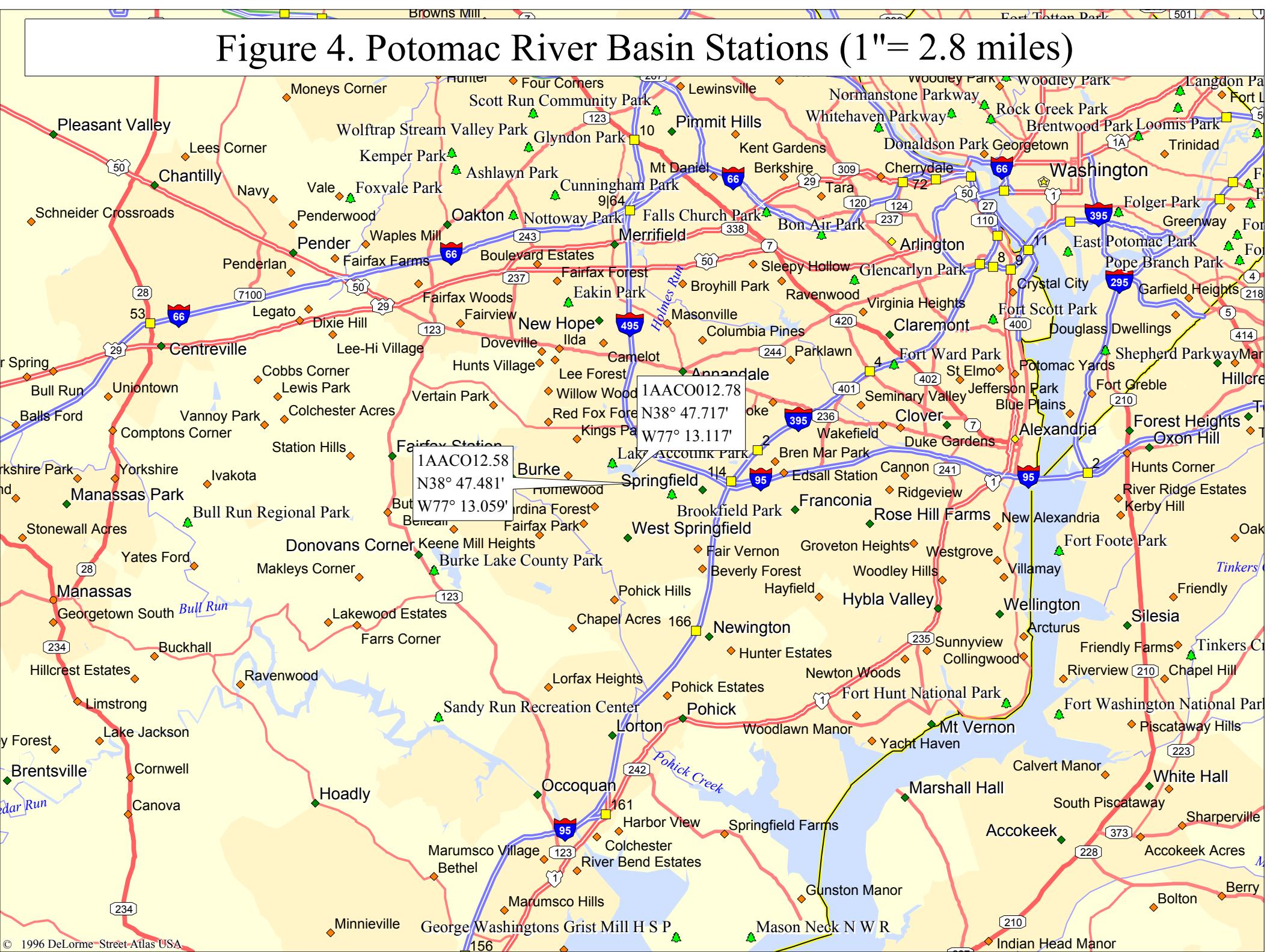


Figure 3. Tennessee and Big Sandy River Basin Stations (1"=14 miles)



# Figure 4. Potomac River Basin Stations (1"= 2.8 miles)



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